CLAIMS

1. A method of combining TDM data and data packets comprising:

receiving a plurality of TDM data columns;

receiving a plurality of data packets,

transforming a first subset of the data packets into one or more TDM packet columns; and

combining the TDM packet columns with a first subset of the TDM data columns to form a data payload of an outgoing TDM data frame.

2. The method of Claim 1, wherein a TDM packet column includes a high priority data packet and a low priority data packet.

3. The method of Claim 1, wherein the receiving a plurality of TDM data columns further comprises receiving an incoming TDM data frame containing a second subset of TDM data columns.

4. The method of Claim 3, wherein the receiving a plurality of TDM data columns further comprises receiving a third subset of TDM data columns from a TDM user interface.

5. The method of Claim 3, further comprising separating the second subset of TDM data columns into a plurality of DROP TDM data columns and a plurality of THROUGH TDM data columns.

6. The method of Claim 4, further comprising sending the DROP TDM data columns to a TDM user interface.

7. The method of Claim 5, wherein the outgoing TDM data frame contains the through TDM data columns.

8.   The method of Claim 6, wherein the outgoing TDM data frame contains a third subset of TDM data columns from a TDM user interface.

9.   The method of Claim 1, wherein the receiving a plurality of data packets further comprises receiving an incoming TDM data frame containing a second subset of data packets.

10.   The method of Claim 9, wherein the receiving a plurality of data packets further comprises receiving a third subset of data packets from a packet user interface.

11.   The method of Claim 9, further comprising separating the second subset of data packets as DROP data packets and THROUGH data packets.

12.   The method of Claim 11, wherein the DROP data packets are sent to a packet user interface.

13.   The method of Claim 11, wherein outgoing TDM data frame contains the THROUGH data packets.

14.   The method of Claim 13, wherein the outgoing TDM data frame contains a third subset of data packets from a packet user interface.

15.   The method of Claim 1, wherein the TDM packet columns and the TDM data columns are interleaved within the payload.

16.   A method of combining TDM data and data packets comprising:

receiving a first plurality of TDM data columns;

receiving a first plurality of data packets,

transforming a first subset of the first plurality of data packets into a first group of TDM packet columns;

combining the first group of TDM packet columns with a first subset of the first plurality of TDM data columns to form a first data payload of a first TDM data frame;

receiving a second plurality of TDM data columns;

receiving a second plurality of data packets;

transforming a first subset of the second plurality of data packets into a second group of TDM packet columns; and

combining the second group of TDM packet columns with a first subset of the second plurality of TDM data columns to form a second data payload of a second TDM data frame.

17.   The method of Claim 16, wherein the first payload is larger than the second payload.

18.   The method of Claim 16, wherein the first subset of the first plurality of TDM data columns is larger than the first subset of the second plurality of TDM data columns.

19.   The method of Claim 16, wherein the first group of TDM packet columns is larger than the second group of TDM packet columns.

20.   The method of Claim 16, wherein a TDM packet column includes a high priority data packet and a low priority data packet.

21.   A network node comprising:

a first network interface; and

a TDM/Packet cross connect switch coupled to the first
network interface;

a TDM user interface coupled to the TDM/Packet cross
connect switch; and

a packet user interface coupled to the TDM/Packet cross
connect switch.

22.   The network node of Claim 21, wherein the TDM/Packet
cross connect switch, further comprises a first TDM
Framer/Deframer coupled to the first network interface and
configured to deframe a first TDM frame from the first network
interface.

23.   The network node of Claim 22, further comprising a
first dynamic multiplexer/demultiplexer coupled to the first TDM
Framer/Deframer and the TDM switch and configured to separate
data from the first TDM data frame into TDM data and packet data.

24.   The network node of Claim 23, further comprising a TDM
switch coupled to the first dynamic multiplexer/demultiplexer and
configured to receive a TDM THROUGH payload and a TDM DROP
payload from the first dynamic multiplexer/demultiplexer.

25.   The network node of Claim 24, wherein the TDM switch is
configured to receive a TDM ADD payload from the TDM user
interface.

26.   The network node of Claim 25, wherein the TDM switch is
configured to:

send the TDM THROUGH payload and the TDM ADD payload to
a second dynamic multiplexer/demultiplexer; and

send the TDM DROP payload to the TDM user interface.

27.   The network node of Claim 26, further comprising a
packet switch coupled to the first dynamic
multiplexer/demultiplexer and the second dynamic
multiplexer/demultiplexer.

28.   The network node of Claim 22, further comprising a
packet switch coupled to the first dynamic
multiplexer/demultiplexer and configured to receive a packet
THROUGH payload and a packet DROP payload from the first dynamic
multiplexer/demultiplexer.

29.   The network node of Claim 28, further comprising a
packet user interface and wherein the packet switch is configured
to receive a packet ADD payload from the packet user interface.

30.   The network node of Claim 29, wherein the packet switch
is configured to:
        send the packet THROUGH payload and the packet ADD
    payload to a second dynamic multiplexer/demultiplexer; and
        send the packet DROP payload to the packet user
    interface.

31.   A system for combining TDM data and data packets
comprising:
        means for receiving a plurality of TDM data columns;
        means for receiving a plurality of data packets,
        means for transforming a first subset of the data
    packets into one or more TDM packet columns; and
        means for combining the TDM packet columns with a first
    subset of the TDM data columns to form a data payload of an
    outgoing TDM data frame.

32. The system of Claim 31, wherein a TDM packet column includes a high priority data packet and a low priority data packet.

33. The system of Claim 31, wherein the means for receiving a plurality of TDM data columns further comprises means for receiving an incoming TDM data frame containing a second subset of TDM data columns.

34. The system of Claim 33, wherein the means for receiving a plurality of TDM data columns further comprises means for receiving a third subset of TDM data columns from a TDM user interface.

35. The system of Claim 33, further comprising means for separating the second subset of TDM data columns into a plurality of DROP TDM data columns and a plurality of THROUGH TDM data columns.

36. The system of Claim 34, further comprising means for sending the DROP TDM data columns to a TDM user interface.

37. The system of Claim 35, wherein the outgoing TDM data frame contains the through TDM data columns.

38. The system of Claim 36, wherein the outgoing TDM data frame contains a third subset of TDM data columns from a TDM user interface.

39. The system of Claim 31, wherein the means for receiving a plurality of data packets further comprises means for receiving

an incoming TDM data frame containing a second subset of data
packets.

40.   The system of Claim 39, wherein the means for receiving
a plurality of data packets further comprises means for receiving
a third subset of data packets from a packet user interface.